M. W. COOPER* and C. I RUTHERFORD**

When the members of the Manchester Entomological Society assembled for their October meeting it came to light that two of us had holidayed in Crete during the season and both had butterfly exhibits from that island. Although we had each gone on holiday in search of sunshine and at fairly short notice, we had in fact managed to fit in a fair amount of butterfly collecting without allowing this pursuit to dominate the holiday. Our combined observations covered about 60%of the species known from the island and as they complemented very well three articles in recent volumes of the *Record* it appeared to us worth putting our experience together in one paper.

Crete is dominated by harsh mountains rising out of the sea, stark evidence of its geological origins, for the island is a remnant of a block thrown up in the Tertiary episode. On the northern side Crete has several upland basins, the most notable of which is the arable Lassithi plain, an almost perfect stadium of 50 square miles ringed by mountains. The island supports a varied vegetation despite its demanding climate. Characteristic Mediterranean scrub dominates the landscape. Generally the Cretian flora is similar to that of the Peloponnese and Asia Minor, but the island is also noted for several native species and the quince (Cydonia oblonga) is said to be indigenous.

May 3rd to 17th, C.I.R. The period of this stay fell nicely between the dates of Johnson's visit from 7th to 14th April 1964 and Bretherton's from 1st to 14th June 1969. We were located in a small beach hotel in the village of Karteros a few miles east of Heraklion and much of the collecting was done on some rough ground on the other side of the new trunk road. Here there is a dried up stream bed, though not so dry at this date that there were not still a few dragonflies about; the plants included thistles, thyme and scabious growing amongst rocks, plenty of rough grass and various low rather prickly shrubby plants. At the side of the new road, at the bottom of a twenty foot bank are a row of small trees apparently of the tamarisk group.

In this area many butterflies were seen and examples of most were taken. Pieris rapae L., Maniola jurtina L., Coenonympha thyrsis Freyer and Thymelicus acteon Rott. were all very common throughout our stay; a few Hipparchia semele L. were seen near the trees on the first few days, most were males but the expcted increase in numbers with the addition of females did not occur. Pararge aegeria L. inhabited these trees fairly regularly while Polyommatus icarus Rott. and Colias crocea Geoff. (males only seen) were not uncom mon on the rough ground. In the environs of the hotel single

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specimens were seen of Papilio machaon L., Pieris brassicae L., Gonepteryx cleopatra L., Vanessa cardui L. and Lycaena phlaeas L. but none of these were caught. In the last three days of our stay Philites baton Berg. appeared on the rough ground and both sexes were taken while at the very end of the holiday two specimens each of Lasionmata megera L. and Carcharodus alceae Esp. were taken.

From the 7th to 13th we hired a small car and this enabled us to visit several other promising sites, though no attempt was made to cover the whole island, the western half was never visited and we did not get further east than Gournia, but we reached the south coast twice at Ierapetra and at Matala. The most attractive area we visited was undoubtedly the plateau of Lassithi which we approached from Agios Nikolaos at about mid-day on the 7th; one or two male G. cleopatra were seen among bushes not far from the main road but they soon disappeared when we stopped the car. On the way up we stopped near Potami where the road was lined with a mass of the broom Spartium junceum which grows so abundantly in those parts. Some "blues" were flying round the bushes and the first taken was a worn Lampides boeticus L., but all subsequent captures turned out to be Celastrina argiolus L.. At this point an odd Iphiclides poda*lirius* L. was seen flying in the valley below but the highlight was when I was photographing some flowers my wife captured our first Allancastria cerisvi cretica Rebel, we took a second soon afterwards and saw a few others but they must have been well over at lower altitudes. A single "blue" seen on some cultivated ground near the windmills was not taken but appeared to be P. icarus. We left the plateau by the northwestern road and near Hersonnissou found an interesting collecting ground among the olives but it was too late in the evening for any butterflies to be about. We returned to this place a few days later and took two Euchloe ausonia Hb., seeing also C. crocea, P. aegeria and C. argiolus as well as some of the commoner species.

Our trips were somewhat restricted by rather variable weather and when the English cup final was being played at Wembley in bright sunshine we were confined to the hotel by rain and not making the best use of the car. The road to Ierapetra does not climb as high as the other roads from north to south and at its modest summit was flanked by masses of sabious in bloom but disappointingly with very few butterflies. The beach east of Ierapetra was almost devoid of humans and excellent for swimming but also provided two Pontia daplidice L. caught flying over a grassy patch on the beach, a single P. machaon was seen here but not caught. On the way to Phaistos and Matala we stopped at the summit near Moulia where there was a good growth of sainfoin by the roadside, three I. podalirius were taken here on scabious flowers but only one was worth keeping. Near the archaeological site of Aghia Triada there was a hillside of sainfoin over

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which some small butterflies were flying very rapidly; I did eventually catch one which escaped through a hole in the net leaving behind a single forewing showing it to be *L. boeticus*; its flight was much wilder than that taken at Potami or those I have seen elsewhere. We planned to try the site again after lunch in Matala but heavy rain ruled that out. The only other oservation worth recording was that during a visit to the delightful village of Kritsa, several of the species seen elsewhere were seen again, but in addition a small dark *Vanassid* flying down the street might have been either *Aglais urticae* L. or *Polygonia egea* Cramer, I had no means of knowing which.

July 25th to August 8th, M.W.C. This was later than other periods reported and fell in the hot dry summer; the coastal regions were pleasant due to the etesian winds from the north, whereas the unbroken drought of the interior left a dusty haze pervading the atmosphere. Initially I stayed outside Aghios Nikolaos, a small harbour town to the northeast. A few species of butterfly were seen in the area south of the town. P. machaon were common and larvae feeding on fennel were collected. I. podalilius was also observed but in smaller numbers. P. brassicae, P. rapae, P. daplidice, L. megera and P. icarus were also seen in this area.

A trip to Ierapetra which is the only large town on the south coast produced a few specimens but these did include H. semele flying near the beach. The journey to Lassithi was much more successful, C. crocea, G. cleopatra and Venessa atalanta L. were recorded and P. egea was abundant in the late afternoon sun on the main road through Avrakontes. C. argiolus and P. aegeria were common on the peripheral road of Lassithi and specimens of L. boeticus were taken on the rought track leading to Karphi. Another interesting find at Lassithi were some particularly small specimens of C. alceae flying near the larger normal form. West of Aghios Nikolaos on the old road to Neapolis a few specimens of Leptidea sinapis L. were flying in a wooded area. The indigenous subspecies of the Small Heath Coenonympha pamphilus thyrsis Freyer (treated by some as a good species) was the most frequently observed butterfly being seen in all areas visited.

A rather hurried tour of the western part of the island reevaled many promising collecting grounds which would almost certainly repay a longer visit, though perhaps a little earlier in the year. In the event most of the commoner species were seen again and the only one seen here but not elsewhere was the diminutive *Freyeria trochylus* Freyer which I was pleased to find inland of Rethymnon. This easily overlooked insect was found flitting along a stony path in the heat of the day.

Discussion: A study of Higgins and Riley's Field Guide indicates that 37 species of butterfly occur in Crete. Two of the three articles appearing in the Record in the last few years add six to this list; Johnson records Turanana panagea Rebel and Plebicula thersites Cant. while Higgins reports

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Charaxes jasius L., Nymphalis polychloros L., Pandoriana pandora Schiff. and Quercusia quercus L. Finally, Hockin's note appeared in the Record after our trips were completed and adds Gegenes pumilio Hoff. Neither of us saw any of these seven additional species nor did we add to the combined list of 44 species.

In May C.I.R. recorded 22 species, just half the total; one of these, P. baton, was not recorded on any of the other three expeditions, its appearance towards the end of the holiday gave particular satisfaction and compensated to some extent for the failure to find any of the three really small blues.

In July/August M.W.C. recorded 20 species which also included one, F. trochylus, not reported on any of the other three visits. Four of these 20 species were not among the 22 recorded in May so that our overall total is 26 species.

Neither of us was in the island at the right season for Kretana psylorita Freyer and we did not go in search of it; that neither of us saw Aricia agestis Schiff. was more surprising. Our weakness seemed to be our failure to spot any of the "paired species", for example Pieris ergane Geyer among the P. rapae, Pseudochazara anthelea Hb. among the H. semele, Hyponephele lupina Costa among the M. jurtina, Syntarucus pirithous L. among the L. boeticus or P. thersites among the P. icarus. Nevertheless we each came away well pleased with our first visit and resolved to go back as soon as possible.

References

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CURIOUS DISCOVERY CONCERNING THE DOTTED RUSTIC: RHYACIA SIMULANS HUFNAGEL. — Whilst on a visit to Layer Marney Tower near Colchester in Essex on 31st July 1980, I came across considerable numbers of dead specimens of the Dotted Rustic. Between 30 and 40 badly damaged and partially wingless moths were to be found on the windowsills of the Elizabethan tower and particularly on the floor of the church in the grounds nearby. The date of my visit would seem to fall in the period when this species is said to be aestivating, and so what disaster befell this local but substantial emergence it would be interesting to discover. — J. N. D'ARCY, Monkswell Cottage, Edington, Westbury, Wiltshire.

THE VESTAL: RHODOMETRA SACRARIA L. IN SURREY. — A fine male of this migrant was at my garden m.v.l. here on 13th August 1980. - K. G. W. EVANS, 31 Havelock Road, Croydon, Surrey.